

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The Examiner is kindly requested to consider and initial next to each item of information listed in the Information Disclosure Statement filed on October 23, 2009 and return to the undersigned a fully-initialed copy of the Form PTO-1449.

Claims 15-40 are pending in this application. Claims 15, 19, 23 and 31 are independent. By this Amendment, the specification and Claims 15, 16, 23, 24, 32, 34 and 40 are amended to correct minor informalities. No new matter is added.

Applicants appreciate the Examiner's indication that Claims 16, 18, 21, 22, 24-26, 28-30, 32, 33 and 35-39 recite allowable subject matter, and would be allowable if rewritten to be in independent form including all of the features of the base claim and any intervening claims. Applicants submit that all pending claims are allowable for the reasons set forth below.

The Office Action objects to the specification because of a minor informality. The specification is amended to obviate the objection. Accordingly, withdrawal of the objection is respectfully requested.

The Office Action objects to Claims 15, 16 and 34 because of minor informalities. Claims 15, 16 and 34 are amended to obviate the objection. Thus, withdrawal of the objection is respectfully requested.

The Office Action rejects claims 15-18, 23-30, 32, 37 and 40 under 35 U.S.C. §112, second paragraph.

Claims 15 and 16 are amended to obviate the rejection of Claims 15-18. Further, antecedent basis for "the detecting device" recited in the second sub

paragraph of Claim 15 can be found in the last line of the first subparagraph in Claim 15. Claims 23 and 24 are amended to obviate the rejection of Claims 23-30. Claim 32 is amended in a manner similar to Claim 24.

Antecedent basis for "the light reflecting mark" recited in Claim 37 can be found in Claim 36, the claim from which Claim 37 depends. Claims 15 and 40 are amended to obviate the rejection of Claim 40.

Withdrawal of the rejection is respectfully requested.

The Office Action rejects independent Claim 31 under 35 U.S.C. §102(b) over Taneda et al. ("Taneda"), U.S. Patent No. 4,244,539. The rejection is respectfully traversed.

Independent Claim 31 is directed to a wire-reel identifying method. The method comprises providing a first to-be-detected portion and a second to-be-detected portion on a wire reel, detecting the first to-be-detected portion with a first detecting apparatus to detect an amount of rotation of the wire reel, detecting the second to-be-detected portion with a second detecting apparatus during rotation of the wire reel, and counting with a control circuit the second to-be-detected portion detected with the second detecting apparatus to detect a type of the wire reel.

Taneda fails to disclose the following aspects of independent Claim 31.

First, Taneda fails to disclose detecting a first to-be-detected portion with a first detecting apparatus to detect an amount of rotation of a wire reel.

Taneda discloses a coil winding apparatus that forms a "perfect layer coil" from the initial stage of a winding operation without being affected by non-uniformity in diameter of a wire 19 or the winding width of a bobbin 15 on which the wire 19 is wound (see Abstract and col. 1 lines 47-52 of Taneda). Taneda's apparatus includes

a pair of detectors 46a, 46b, and a pair of flanges 15a and 15b provided on ends of the bobbin 15, as shown in Figs. 1 and 4-6 of Taneda. The pair of detectors 46a, 46b has contacts, which in conjunction with respective detection circuits 102, 103, detect the position of flanges 15a and 15b relative to each other (i.e., the distance between flanges 15a and 15b) by contacting the respective flanges 15a and 15b (see col. 4, line 51 to col. 5, line 14 of Taneda). The detection results are used to calculate a width of the bobbin 15 (see col. 5, lines 24-29 of Taneda). The Office Action takes the position that the detectors 46a, 46b correspond to the claimed first and second detecting apparatuses, respectively, that the bobbin 15 corresponds to the claimed wire reel, and that the two flanges 15a and 15b correspond to the first and second to-be-detected portions, respectively.

However, Taneda's detector 46a (said by the Office Action to correspond to the claimed first detecting apparatus) simply detects the position of the first flange 15a (said by the Office Action to correspond to the claimed first to-be-detected portion). In particular, Taneda discloses that the detectors 46a, 46b are moved towards the first and second flanges 15a, 15b until the contact of each detector 46a, 46b contacts the respective flange (see col. 4, line 65 to col. 5, line 4). Once contact is made, the detectors 46a, 46b send a signal to respective detecting circuits 102, 103 which communicate with an arithmetic circuit 104 to calculate the position of the first flange 15a on the bobbin 15 relative to the second flange 15b (see col. 5, lines 6-29 of Taneda). Further, winding of the wire 19 around the bobbin 15 (i.e., rotation of the bobbin 15) is not even started until after the position of the first and second flanges is detected (see col. 7, lines 54-63 and col. 9, lines 3 and 4). Thus, the detector 46a ("first detecting apparatus") simply detects the position of the first flange

15a ("first to-be-detected portion). The detector 46a does **not** detect an amount of rotation of the first flange 15a or bobbin 15 as recited in independent Claim 31. Therefore, independent Claim 31 is patentable over Taneda for at least these reasons.

Second, Taneda fails to disclose detecting a second to-be-detected portion with a second detecting apparatus during rotation of a wire reel.

As discussed above, the Office Action asserts that the second detector 46b corresponds to the claimed second detecting apparatus, and that the second flange 15b corresponds to the claimed second to-be-detected portion. However, the motor 8 which turns the bobbin 15 (i.e., that rotates the bobbin 15) to wind the wire 19 around the bobbin 15 is not turned on until after the position of the second flange 15b ("second to-be-detected portion") is detected (see col. 7, lines 54-63 and col. 9, lines 3 and 4 of Taneda). That is, rotation of the bobbin 15 ("wire reel") begins only after the second detector 46a detects the position of the second flange 15b. The detection of the second flange 15b by the second detector 46b does **not** occur during rotation of the bobbin 15 as recited in independent Claim 31. Therefore, independent Claim 31 is patentable over Taneda for at least these additional reasons.

Third, Taneda's control means 100 and arithmetic circuit 108 (said by the Office Action to collectively correspond to the claimed control circuit) does not count the second flange 15b. As discussed above, the detector 46b ("second detecting apparatus") simply detects the position of the second flange 15a. The arithmetic circuit 108 uses the information received from the detector 46b simply to calculate the turns per layer of wire 19 which is allowed on the bobbin 15 (see col. 5, lines 29-

35 of Taneda). Neither the detector 46b nor the arithmetic circuit 108 counts the second flange 15b.

In connection with the above, the Examiner appears to have disregarded the word "counting" in Claim 31. The Examiner is reminded that "During patent examination, the pending claims **must** be 'given their broadest reasonable interpretation **consistent with the specification**'" (MPEP §2111, emphasis added). The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) stated:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description **so that the meaning of the terms in the claims may be ascertainable by reference to the description**" (emphasis added, see also 37 CFR §1.75(d)(1)).

In view of the above-referenced case law, it is clear that the Examiner **must** reasonably interpret "counting" in a manner that is consistent with the definition provided in the specification. Applicants' specification clearly states that "the control circuit counts *the number* of the marks (see page 21, line 22 and 23 of the present specification, emphasis added). Taneda's detector 46b and the arithmetic circuit 108 do not count *the number* of the second flanges 15b, as discussed above. Nor would there be any reason for the detector 46b and the arithmetic circuit 108 to count *the number* of the second flanges 15b. Thus, independent Claim 31 is patentable over Taneda for at least these additional reasons.

Withdrawal of the rejection of Claim 31 is respectfully requested.

The Office Action rejects Claim 34 under 35 U.S.C. §103(a) over Taneda in view of Hanagasaki et al. ("Hanagasaki"), U.S. Patent No. 5,515,887. The rejection is respectfully traversed.

Hanagasaki does not overcome the deficiency of Taneda as for the above with respect to Claim 31. Thus, Claim 34 is patentable over Taneda and Hanagasaki at least by virtue of its dependence from patentable independent Claim 31. Therefore, a detailed discussion of the additional distinguishing features recited in this dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 15, 19, 23 and 40 under 35 U.S.C. §103(a) over Taneda in view of Ishikawa et al. ("Ishikawa"), U.S. Patent No. 6,401,766. The rejection is respectfully traversed.

The Office Action acknowledges that Ishikawa fails to disclose a control circuit that judges a detection output of a detecting device that comprises a first detecting apparatus and a second detecting apparatus, wherein the first detecting apparatus detects at least one first to-be-detected portion provided on the wire reel to detect an amount of rotation of the wire reel, and the second detecting apparatus detects at least one second to-be-detected portion provided on the wire reel passing the second detecting apparatus during the amount of rotation of the wire reel detected by the first detecting apparatus, and wherein the control circuit counts the at least one second to-be-detected portion detected by the second detecting apparatus, as recited in independent Claim 15, and similarly recited in independent claims 19 and 23.

The Office Action asserts that these features are disclosed by Taneda, and that it would have been obvious to modify Ishikawa's machine with the features of Taneda's device to result in the claimed combination of features.

However, for the reasons discussed above, Taneda fails to disclose, in combination with the other claimed features, (1) a first detecting apparatus that detects at least one first to-be-detected portion provided on the wire reel to detect an amount of rotation of the wire reel, (2) a second detecting apparatus that detects at least one second to-be-detected portion provided on the wire reel passing the second detecting apparatus during the amount of rotation of the wire reel, and (3) a control circuit that counts the at least one second to-be-detected portion detected by the second detecting apparatus. Thus, Taneda fails to overcome the deficiencies of Ishikawa. Therefore the combination of Taneda and Ishikawa would not have resulted in the claimed combination of features. Accordingly, independent Claims 15, 19 and 23 are patentable over Taneda and Ishikawa for at least these reasons.

Claim 40 is patentable over Taneda and Ishikawa at least by virtue of its dependence from patentable independent Claim 15. Thus, a detailed discussion of the additional distinguishing features recited in this dependent claim is not set forth at this time. Withdrawal of the rejection is respectfully requested.

Withdrawal of the rejection is respectfully requested.

The Office Action rejects Claims 17, 20 and 27 under 35 U.S.C. §103(a) over Ishikawa in view of Taneda, and further in view of Hanagasaki. This rejection also is respectfully traversed.

Claims 17, 20 and 27 are patentable over the applied references at least by virtue of their dependence to their respective independent claims. Thus, a detailed

discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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